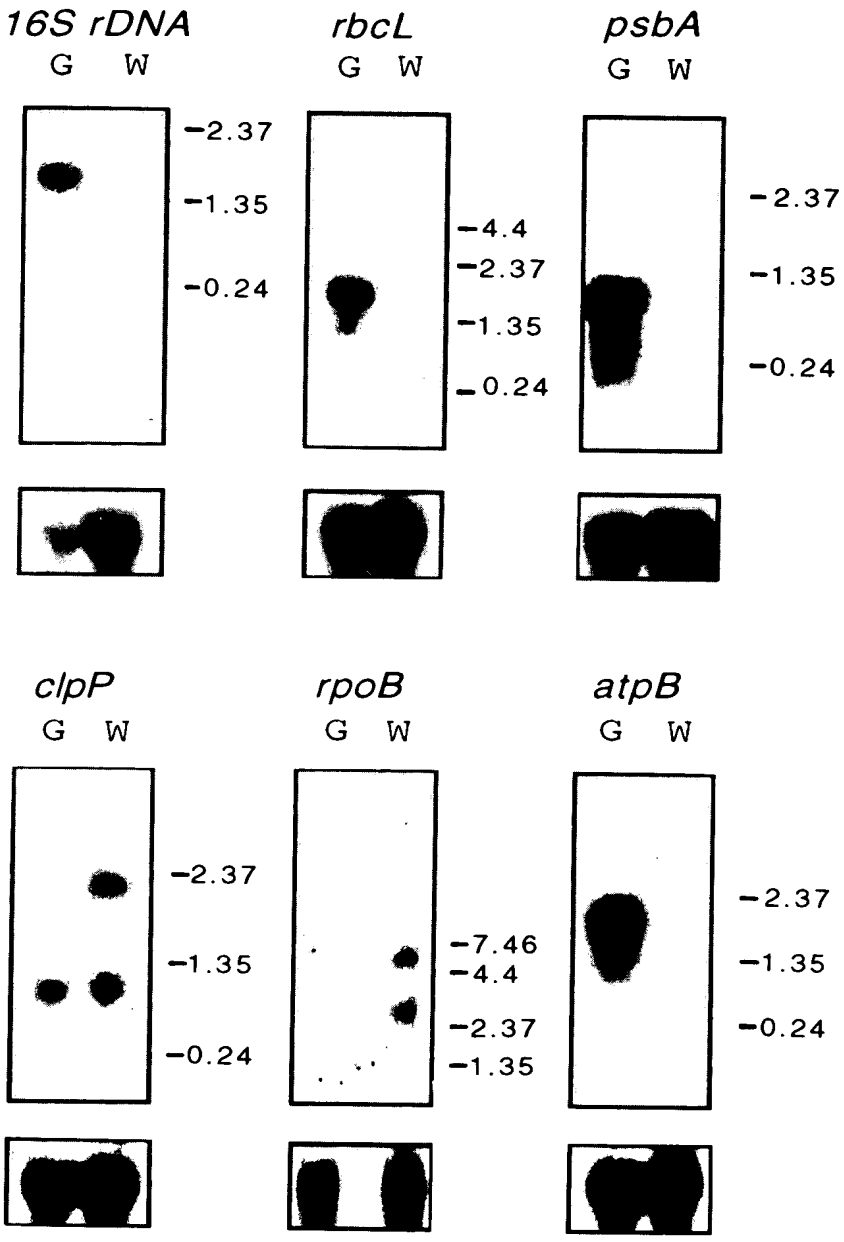

16S rDNA
G W
2.37
1.35
0.24
rbcL
G W
4.4
2.37
1.35
0.24
psbA
G W
2.37
1.35
0.24
clpP
G W
2.37
1.35
0.24
rpoB
G W
7.46
4.4
2.37
1.35
atpB
G W
2.37
1.35
0.24

FIG. 1

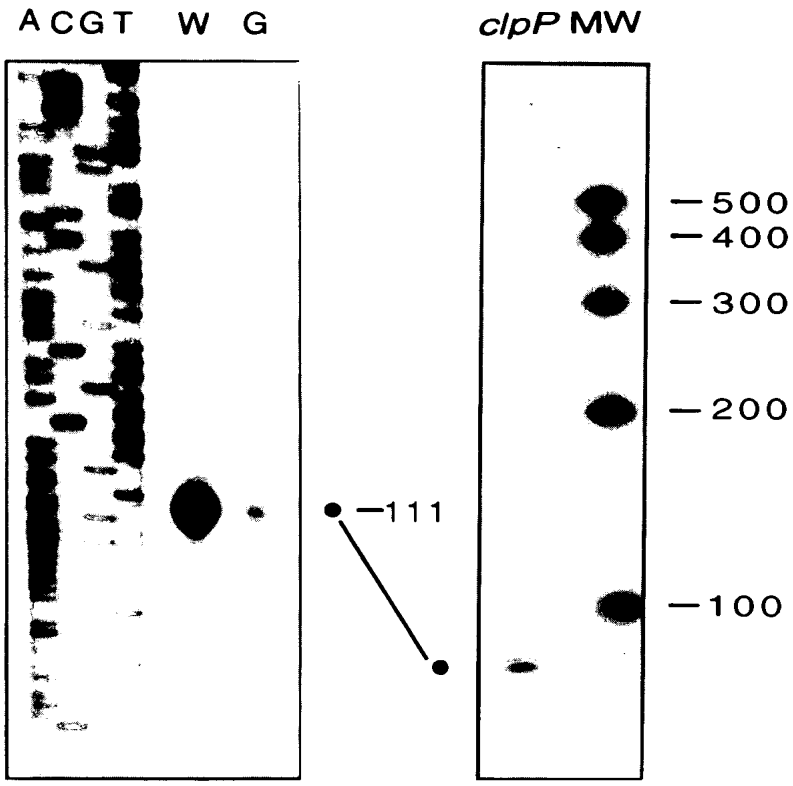


FIG. 2A FIG. 2B

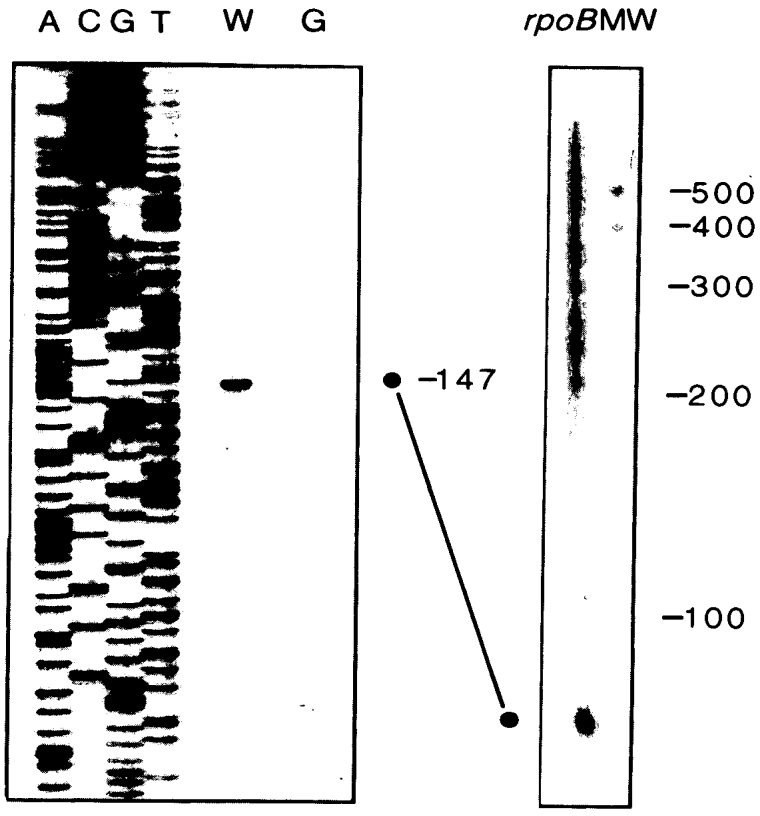


FIG. 3A FIG. 3B

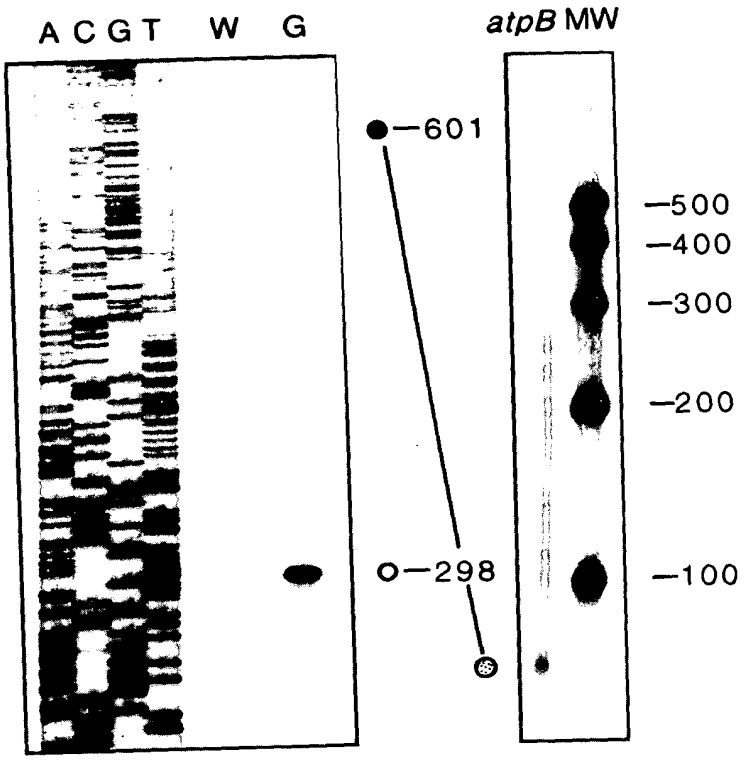


FIG. 4A FIG. 4B

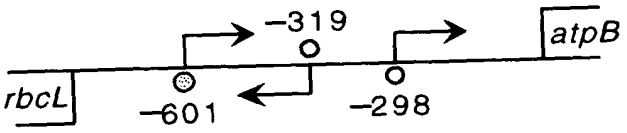


FIG. 4C

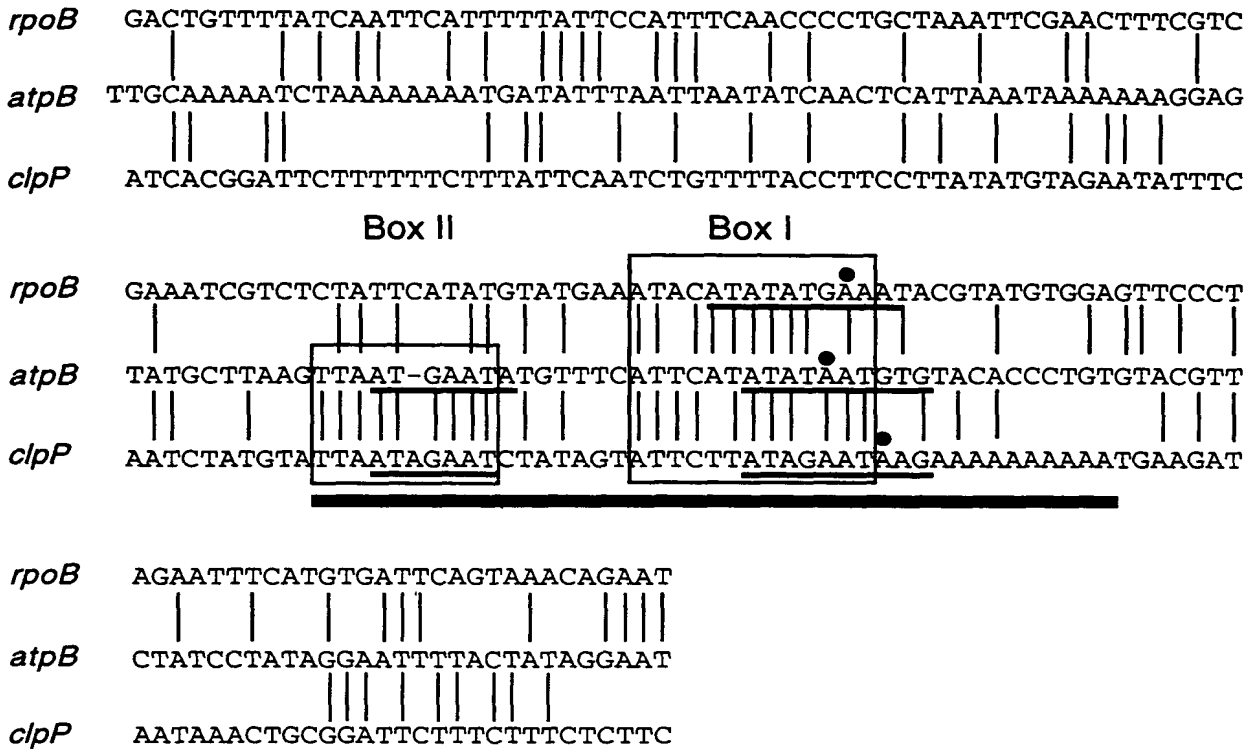


FIG. 5A

atpB

Maize	TAAGTTAATGAATATGTTTCATTCATATATAATGTGACACC
Sorghum	TAAGTTAATGAATATGTTTCATTCATATATAATGTGACACC
Barley	TAGGTTAATGAATATGTTTCATTCATATATAATGCGACACC
Wheat	TAGGTTAATGAATATGTTTCATTCATATATAATGCGACACC
Rice	TCATTCAATATAATATGTTTCATTCATATATAATGCGACACC

FIG. 5B

rpoB

Maize	CTCTATTCATATGTATGAAATACATATATGAAATACGTATG
Rice	CTCTATTCATATGTATGAAATACATATATGAAATACGTATG

FIG. 5C

clpP

Maize	TTAATAGAATCTATAGTATTCTTATAGAATAAGAAAAAAAA
Rice	TTAATAGAATCTATAGTATTCTTATAGAATAAGAAAAAAAA
Wheat	TTAATAGAATCTATAGTATTCATATAGAATAAGAAAAAAA

FIG 5D

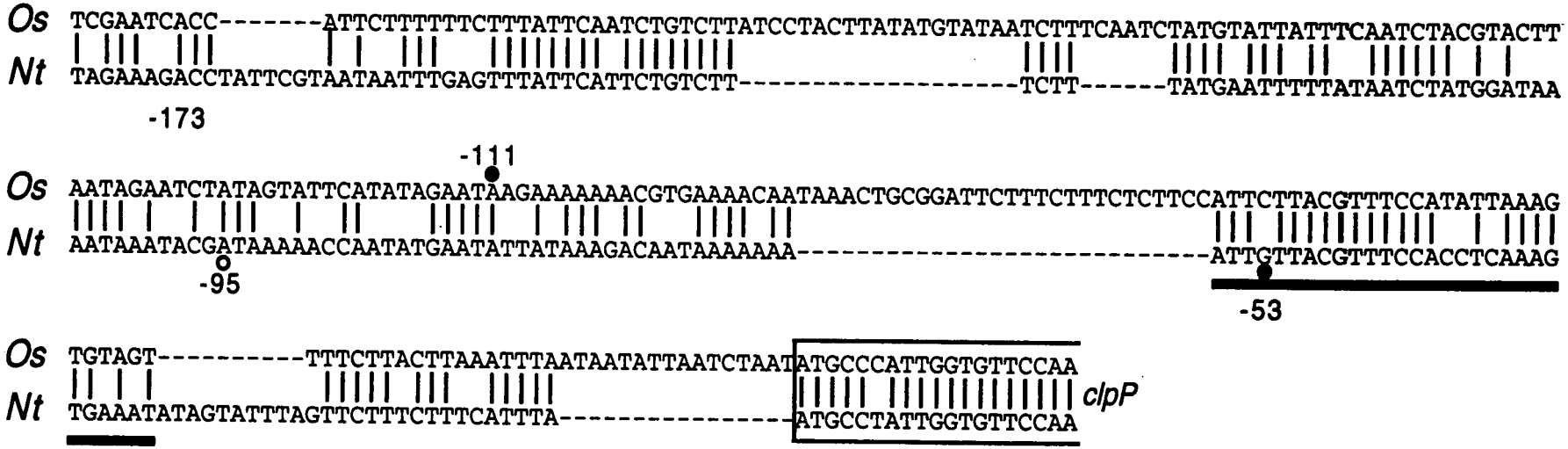
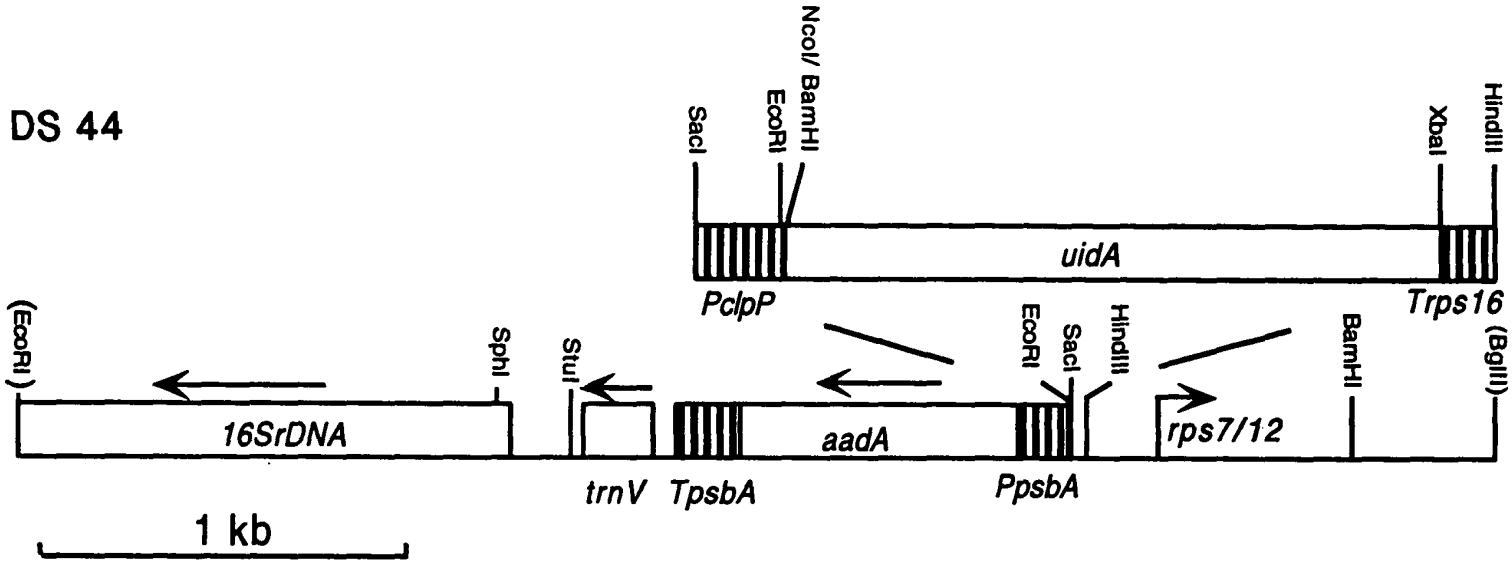

Os
Nt
TCGAATCACC-------ATTCTTTTTTCTTTATTCAATCTGTCTTATCCTACTTATATGTATAATCTTTCAATCTATGTATTATTTCAATCTACGTACTT
TAGAAAGACCTATTCGTAATAATTTGAGTTTATTCATTCTGTCTT----------TCTT------TATGAATTTTTATAATCTATGGATAA
-173
-111
AATAGAATCTATAGTATTCATATAGAATAAGAAAAAAACGTGAAAACAATAAACTGCGGATTCTTTCTTTCTCTTCCATTCTTACGTTTCCATATTAAAG
AATAAATACGATAAAAACCAATATGAATATTATAAAGACAATAAAAAAA----------ATTGTTACGTTTCCACCTCAAAG
-95
-53
TGTAGT----------TTTCTTACTTAAATTTAATAATATTAATCTAATATGCCCATTGGTGTTCCAA
TGAAATATAGTATTTAGTTCTTTCTTTCATTTA----------ATGCCTATTGGTGTTCCAA
clpP

FIG. 6



SacI

GAGCTCGAATCACCATTCTTTTTTCTTTATTCAATCTGTCTTATCCTACTTATATGTATAATCTTTCAATCTATGTATTATTTCAATCTACGTACTTAAT

AGAATCTATAGTATTCATATAGAATAAGAAAAAAACGTGAAAACAATAAACTGCGGATTCTTTCTTTCTCTTCCATTCTTACGTTTCCATATTAAAGTGT

AGTTTTCTTACTTAAATTTAATAATATTAATCTAATATGCCCATTGGTGTTCCAAGAATTCAGTTGTAGGGAGGGATCCATGG

EcoRI

NcoI

FIG. 7

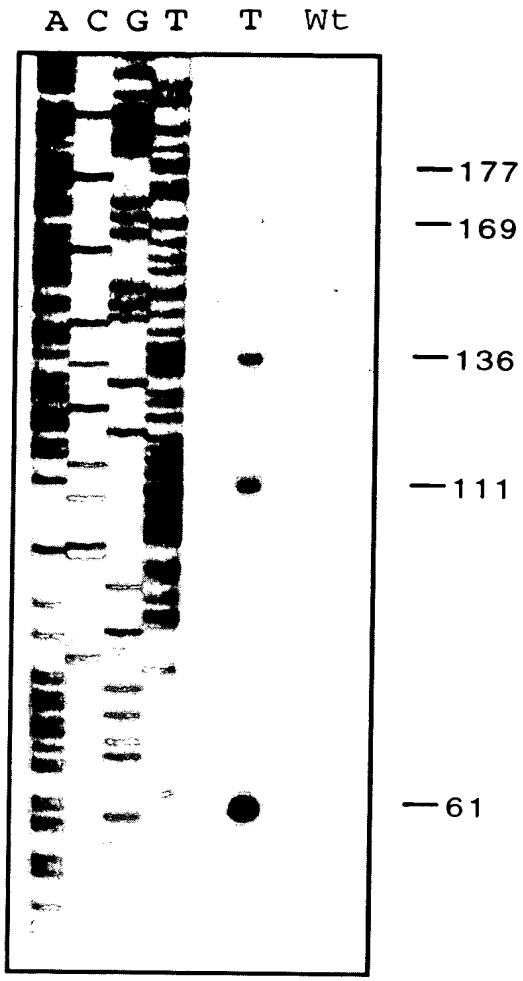

A C G T T Wt
177
169
136
111
61

FIG. 8A

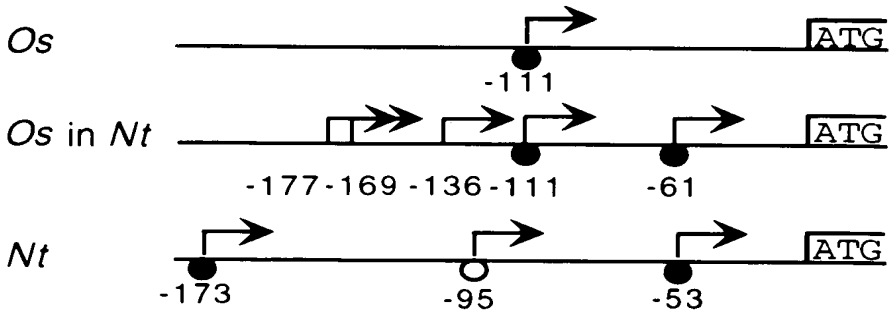

Os
ATG
-111
Os in Nt
ATG
-177 -169 -136 -111
-61
Nt
ATG
-173
-95
-53

FIG. 8B

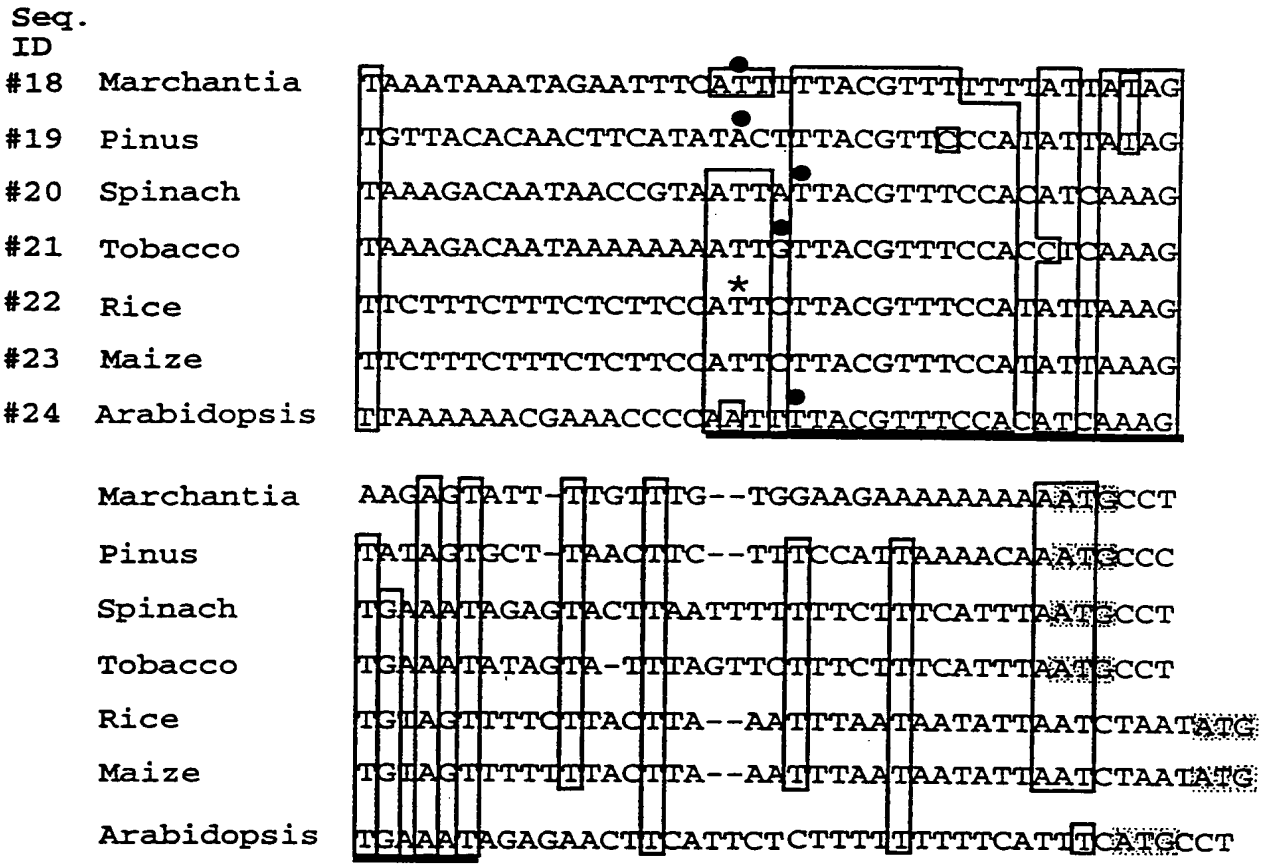

Seq. ID
#18 Marchantia
#19 Pinus
#20 Spinach
#21 Tobacco
#22 Rice
#23 Maize
#24 Arabidopsis
Marchantia
Pinus
Spinach
Tobacco
Rice
Maize
Arabidopsis

FIG. 9

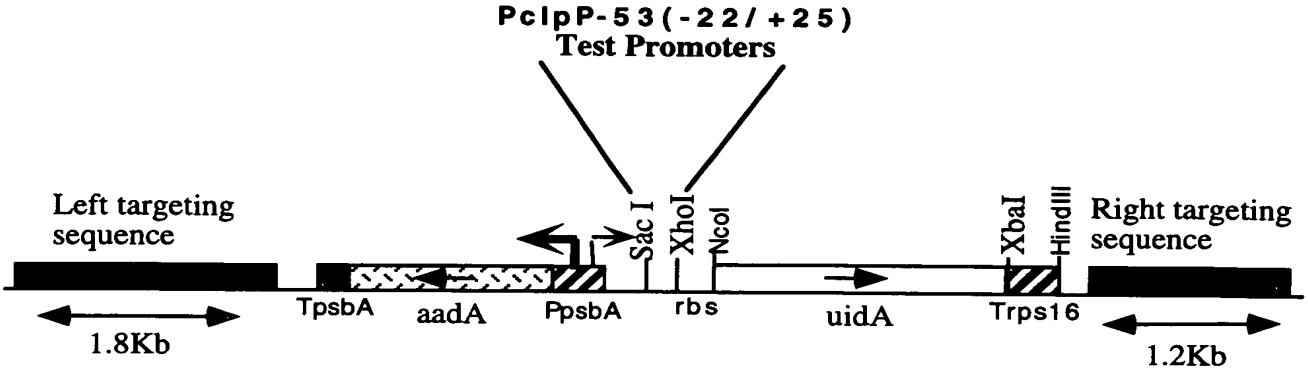

PclpP-53(-22/+25)
Test Promoters
Left targeting sequence
Sac I
XhoI
NcoI
XbaI
HindIII
Right targeting sequence
TpsbA
aadA
PpsbA
rbs
uidA
Trps16
1.8Kb
1.2Kb

FIG. 10

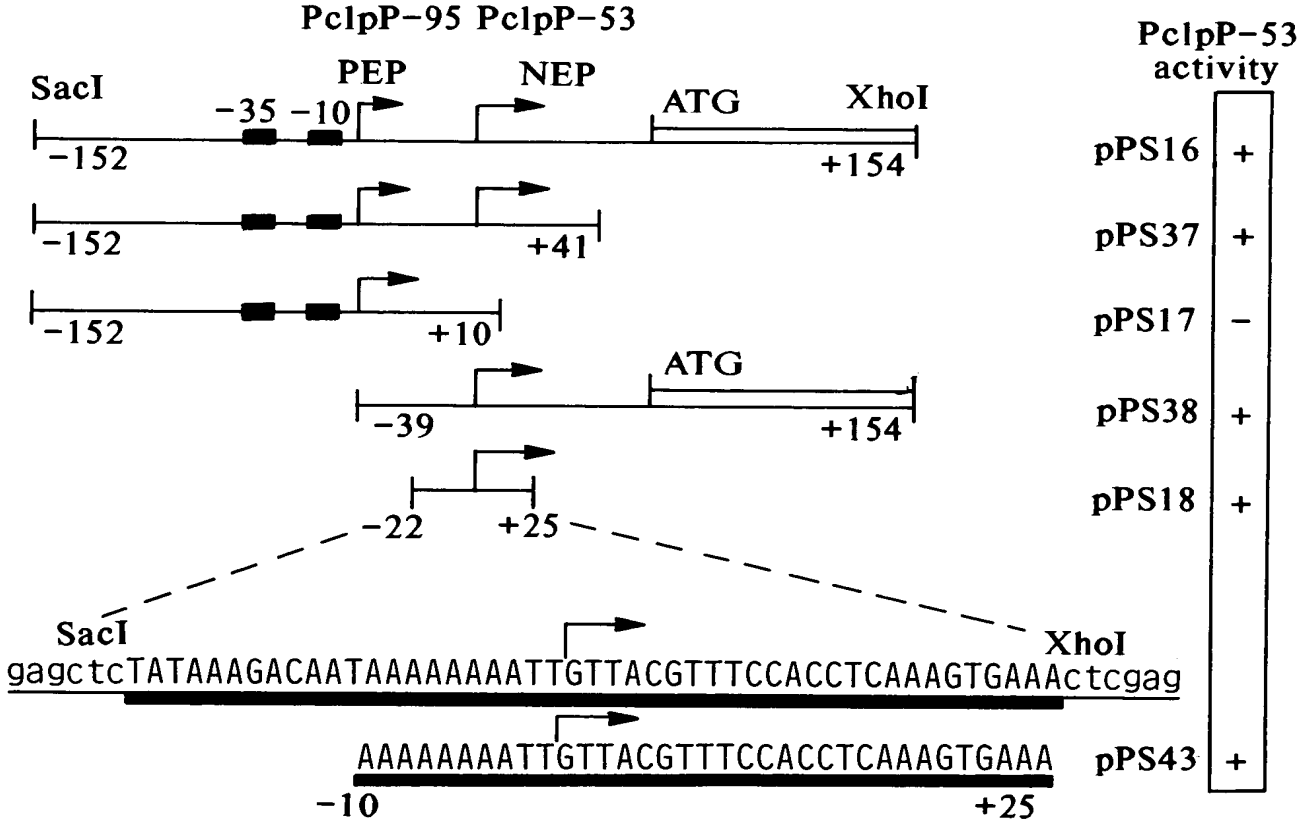

PclpP-95 PclpP-53
PclpP-53 activity
SacI
PEP
NEP
-35 -10
ATG
XhoI
-152
+154
-152
+41
-152
+10
ATG
-39
+154
-22
+25
pPS16 +
pPS37 +
pPS17 -
pPS38 +
pPS18 +
SacI
XhoI
gagctcTATAAAGACAATAAAAAAAATTGTTACGTTTCCACCTCAAAGTGAAActcgag
AAAAAAAATTGTTACGTTTCCACCTCAAAGTGAAA
pPS43 +
-10
+25

FIG II

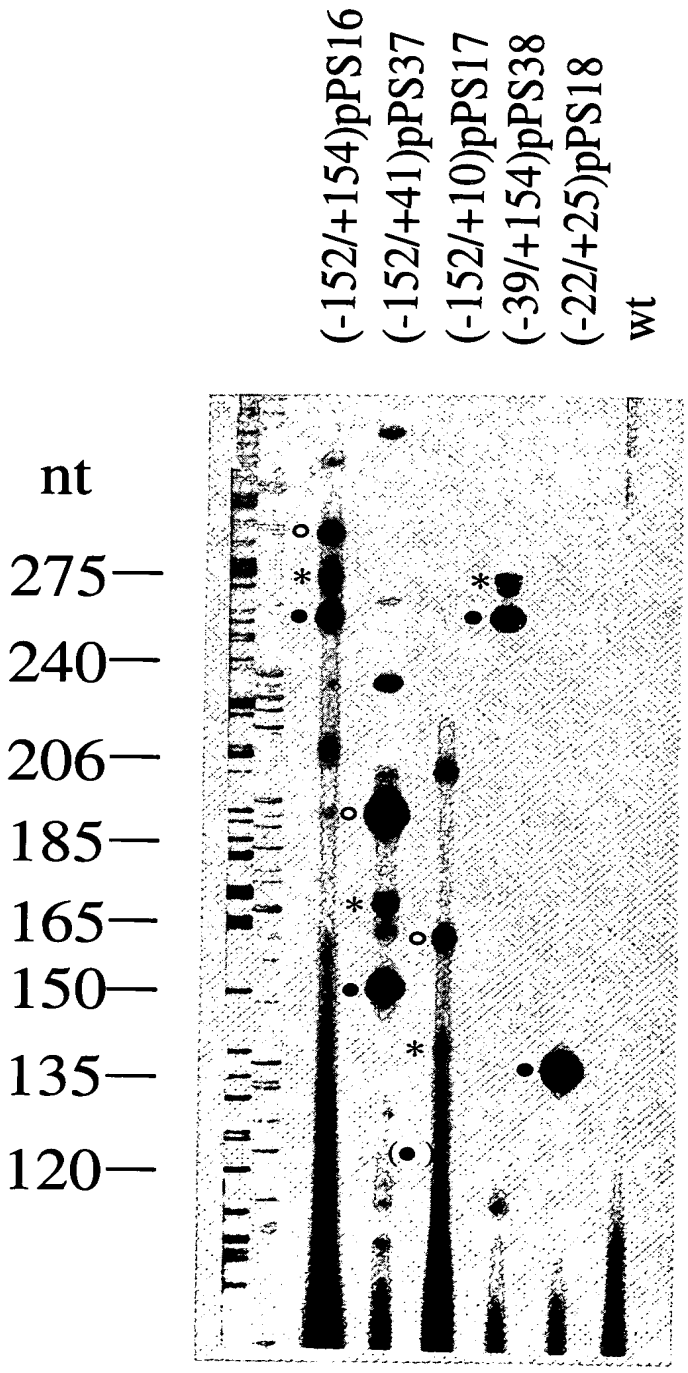

(-152/+154)pPS16
(-152/+41)pPS37
(-152/+10)pPS17
(-39/+154)pPS38
(-22/+25)pPS18
wt
nt
275
240
206
185
165
150
135
120

FIG. 12

SacI ▪74579 (c)

```
   1  gagctcTATA AAGACAATAA AAAAAATTGT TACGTTTCCA CCTCAAAGTG
        ▪74533 (c)
  51  AAActcgaga attcagttgt agggagggat ccATGGAACA AAAACTCATT
 101  TCTGAAGAAG ACTTGgtacg tcctgtagaa accccaaccc gtgaaatcaa
 151  aaaactcgac ggcctgtggg cattcagtct ggatcgcgaa aactgtggaa
 201  ttgatcagcg ttggtgggaa agcgcgttac aagaaagccg ggcaattgct
 251  gtgccaggca gttttaacga tcagttcgcc gatgcagata ttcgtaatta
 301  tgcgggcaac gtctggtatc agcgcgaagt ctttataccg aaaggttggg
 351  caggccagcg tatcgtgctg cgtttcgatg cggtcactca ttacggcaaa
 401  gtgtgggtca ataatcagga agtgatggag catcagggcg gctatacgcc
 451  atttgaagcc gatgtcacgc cgtatgttat tgccgggaaa agtgtacgta
 501  tcaccgtttg tgtgaacaac gaactgaact ggcagactat cccgccggga
 551  atggtgatta ccgacgaaaa cggcaagaaa aagcagtctt acttccatga
 601  tttctttaac tatgccggaa tccatcgcag cgtaatgctc tacaccacgc
 651  cgaacacctg ggtggacgat atcaccgtgg tgacgcatgt cgcgcaagac
 701  tgtaaccacg cgtctgttga ctggcaggtg gtggccaatg gtgatgtcag
 751  cgttgaactg cgtgatgcgg atcaacaggt ggttgcaact ggacaaggca
 801  ctagcgggac tttgcaagtg gtgaatccgc acctctggca accgggtgaa
 851  ggttatctct atgaactgtg cgtcacagcc aaaagccaga cagagtgtga
 901  tatctacccg cttcgcgtcg gcatccggtc agtggcagtg aagggccaac
 951  agttcctgat taaccacaaa ccgttctact ttactggctt tggtcgtcat
1001  gaagatgcgg acttacgtgg caaaggattc gataacgtgc tgatggtgca
```

FIG. 13A

```
1051  cgaccacgca ttaatggact ggattggggc caactcctac cgtacctcgc
1101  attaccctta cgctgaagag atgctcgact gggcagatga acatggcatc
1151  gtggtgattg atgaaactgc tgctgtcggc tttaacctct ctttaggcat
1201  tggtttcgaa gcgggcaaca agccgaaaga actgtacagc gaagaggcag
1251  tcaacgggga aactcagcaa gcgcacttac aggcgattaa agagctgata
1301  gcgcgtgaca aaaaccaccc aagcgtggtg atgtggagta ttgccaacga
1351  accggatacc cgtccgcaag tgcacgggaa tatttcgcca ctggcggaag
1401  caacgcgtaa actcgacccg acgcgtccga tcacctgcgt caatgtaatg
1451  ttctgcgacg ctcacaccga taccatcagc gatctctttg atgtgctgtg
1501  cctgaaccgt tattacggat ggtatgtcca aagcggcgat ttggaaacgg
1551  cagagaaggt actggaaaaa gaacttctgg cctggcagga gaaactgcat
1601  cagccgatta tcatcaccga atacggcgtg gatacgttag ccgggctgca
1651  ctcaatgtac accgacatgt ggagtgaaga gtatcagtgt gcatggctgg
1701  atatgtatca ccgcgtcttt gatcgcgtca gcgccgtcgt cggtgaacag
1751  gtatggaatt tcgccgattt tgcgacctcg caaggcatat tgcgcgttgg
1801  cggtaacaag aaagggatct tcactcgcga ccgcaaaccg aagtcggcgg
1851  cttttctgct gcaaaaacgc tggactggca tgaacttcgg tgaaaaaccg
1901  cagcagggag gcaaacaatg aatcaacaac tctcctggcg caccatcgtc
                                    ▪5087 (c)
1951  ggctacagcc tcggtgggga attgctctag aGAAATTCAA TTAAGGAAAT
2001  AAATTAAGGA AATACAAAAA GGGGGGTAGT CATTTGTATA TAACTTTGTA
2051  TGACTTTTCT CTTCTATTTT TTTGTATTTC CTCCCTTTCC TTTTCTATTT
                                 ▪4939 (c)
2101  GTATTTTTTT ATCATTGCTT CCATTGAATT aattcaagct t HindIII
```

FIG. 13B

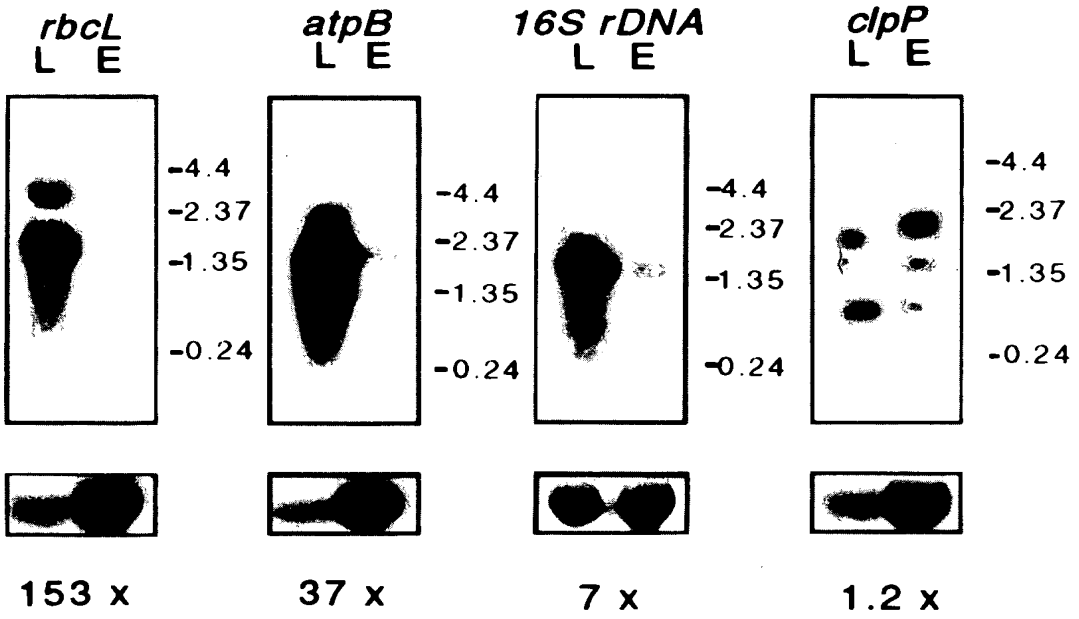

rbcL
L E
atpB
L E
16S rDNA
L E
clpP
L E
-4.4
-2.37
-1.35
-0.24
153 x
37 x
7 x
1.2 x

FIG. 14

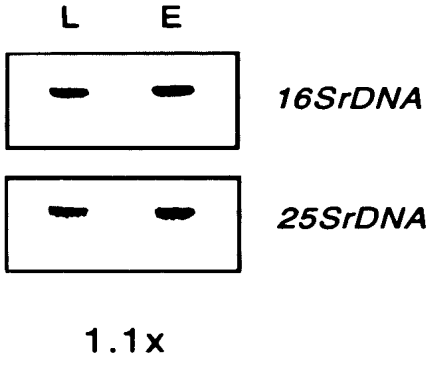

L E
16SrDNA
25SrDNA
1.1x

FIG 15

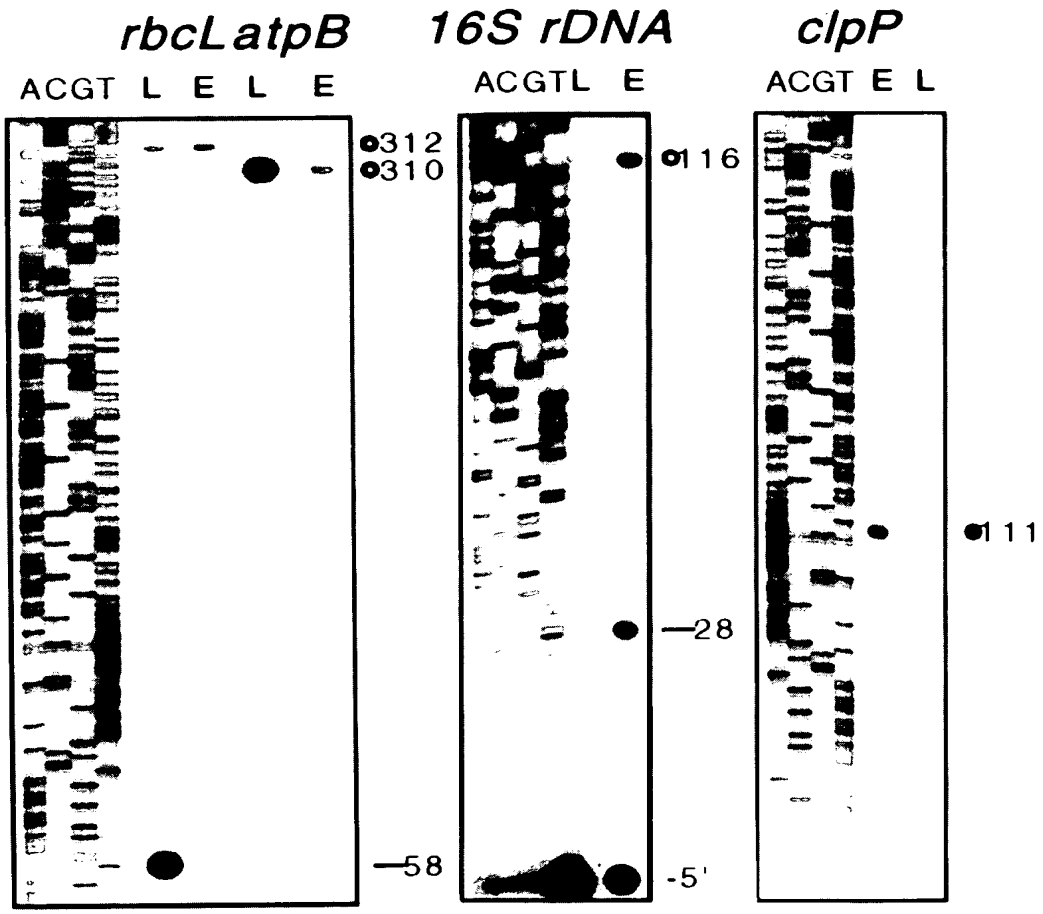

rbcLatpB
ACGT L E L E
312
310
58
16S rDNA
ACGTL E
116
28
-5'
clpP
ACGT E L
111

FIG. 16

16SrDNA

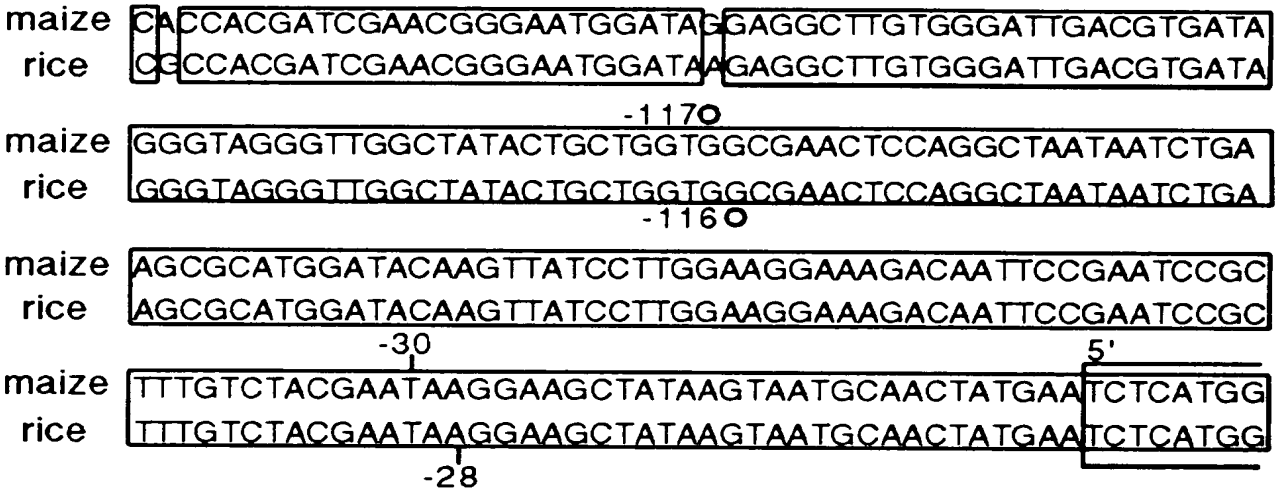


FIG. 17A

clpP

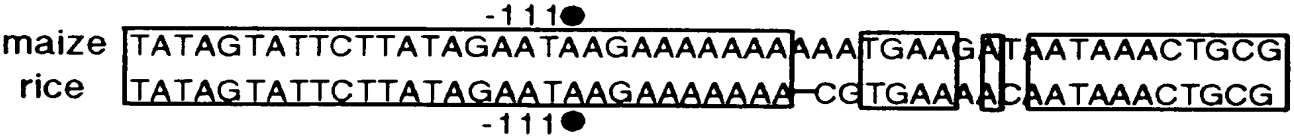


FIG. 17B